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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/445,990

12/16/1999

LUTZ LANGHANS

LANGHANS

1632

20151

7590

01/30/2003

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EXAMINER

MENEFEE, JAMES A

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 01/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/445,990

Applicant(s)

LANGHANS ET AL.

Examiner

James A. Menefee

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 14.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

This action is in response to applicant's response filed on 6 December 2002.

Claim Rejections - 35 USC § 112

Claims 1-3, 5-7 and 10-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "close proximity" in line 5 of both claims 1 and 5 is a relative term which renders the claim indefinite. The term "close proximity" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is indefinite how "close" such a "close proximity" allows for.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 4-5, 7-8, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Melamed et al. (previously cited US 3,975,694). Melamed discloses the claimed invention as follows:

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Regarding claim 4, Melamed discloses a resonator for solid-state lasers having a laser rod, a rear mirror, and a semi-reflecting output mirror, where the rear mirror may be convex, the end of the laser rod facing the rear mirror is planar, the other end of the laser rod is convex, and the output mirror is formed by this other end of the laser rod and is semi-reflecting. While this is not explicitly shown in the Figs., see col. 4 lines 36-49. It is disclosed that the mirror may be ground with the curvature of the reflector, and that there are numerous combinations of curvature available other than those explicitly shown. Thus, a resonator with a convex back mirror 12 and a concave front mirror, such as 16, may be used. When the front mirror 16 is ground into the rod, then the rod will have a shape as claimed.

Regarding claims 5 and 11, the limitations are taught as in the rejection of claim 4 above. When the front mirror is ground into the rod, then the front mirror will necessarily be in close proximity to the rod, within 10 mm.

Regarding claims 7-8, the rod is an Nd:glass rod.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 6, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melamed in view of Plaessmann et al. (US 5,615,043).

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Regarding claim 1, Melamed discloses a resonator for solid-state lasers having a laser rod, a rear mirror, and a semi-reflecting output mirror. It is disclosed that the front semi-reflecting mirror may be ground into the rod, in which case it will necessarily be in close proximity to the rod. It is not disclosed that the end of the rod closest to the convex mirror is also convex. Plaessmann teaches that an end of a gain medium may be given a convex shape (col. 8 lines 21-39). It would have been obvious to one skilled in the art to give a convex shape to the end of the laser rod nearest the convex mirror, as this will compensate for any negative thermal lensing effects in the system, as taught by Plaessmann.

Regarding claim 2, the output end of the rod may be kept flat. By saying and/or, Plaessmann teaches that only one end of the rod need be curved.

Regarding claim 3, the output mirror may be formed by the end of the rod. See the 102 rejection above.

Regarding claim 6, the rod is an Nd:glass rod.

Regarding claim 10, when the front mirror is ground into the rod, then the front mirror will necessarily be in close proximity to the rod, within 10 mm.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Menefee whose telephone number is (703) 605-4367.

The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

JM
January 15, 2003


PAUL IP
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800